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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,994	06/29/2001	Jong Jin Park	49128-5019	5674

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT PAPER NUMBER

2629

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/893,994	<b>Applicant(s)</b> PARK ET AL.	
	<b>Examiner</b> Jennifer T. Nguyen	<b>Art Unit</b> 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-17 is/are allowed.
- 6) ☒ Claim(s) 2,3,18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office action is responsive to amendment filed 3/14/06.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 3, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter AAPA) figs. 1-3 in view of Nose et al. (U.S. Patent No. 6,819,311).

Regarding claims 2 and 3, AAPA discloses a method of driving a liquid crystal display including a liquid crystal display panel (2) (fig. 1) having pixels arranged in a matrix form, a gate driver (6) for applying a scanning signal to gate lines (GL1-GLm) of the liquid crystal display panel, and a data driver (4) for supplying a picture data to data lines (DL1-DLn) of the liquid crystal display panel [0005], the method comprising the steps of:

applying a clock pulse (clock) (fig. 2) to the gate driver [0008];

applying first to third gate output enable signals (GOE1-GOE3) (fig. 3) to the gate driver [0009]-[0010]; and

applying a scanning pulse to two gate lines during one period of the clock pulse (fig. 2) [0008].

AAPA differs from claims 2 and 3 in that it does not specifically disclose the data driver supplies the picture data to the data lines when the scanning pulse is applied to a first gate line of

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the two gate lines, and supplies a black data to the data lines when the scanning pulse is applied to a second gate line of the two gate lines.

Nose teaches data driver supplies the picture data (t1) to the data lines when the scanning pulse is applied to a first gate line of the two gate lines, and supplies a black data (t2) to the data lines when the scanning pulse is applied to a second gate line of the two gate lines (figs. 1 and 12, col. 8, line 42 to col. 9, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the supplying the picture data as taught by Nose in the system of AAPA in order to prevent motion blur without resulting in an increase in circuit size or reduction in panel numerical aperture.

Regarding claims 18-20, AAPA teaches a method for driving a liquid crystal display panel (2), comprising:

selecting two gate lines (GL1, GL4) that are separated by a predetermined number of gate lines based on received first to third gate output enable signals (fig. 3);

AAPA differs from claims 18-20 in that it does not specifically disclose “providing picture signals to a row of pixels...prior to being updated”.

Nose teaches providing picture signal (t1) to a row of pixels corresponding to one of the two selected gate lines;

providing a reference signal (t2) to a row of pixels corresponding to the other one of the two selected gates lines;

repeating for different pairs of gate lines so that all rows of pixels are refreshed by corresponding picture signals in one frame; wherein each frame so that updated picture signals

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are provided to the pixels that bear the reference signal immediately prior to being updated (fig. 1 and 12, col. 8, line 42 to col. 9, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate providing picture signals and reference signal as taught by Nose in the system of AAPA in order to prevent motion blur without resulting in an increase in circuit size or reduction in panel numerical aperture.

Regarding claims 21-22, the combination of AAPA and Nose teaches a horizontal band of pixels applied with the reference signal sweeps an entire screen of the liquid crystal display panel from the top to the bottom in each frame (col. 8, line 42 to col. 9, line 7 of Nose).

4. Claims 5-17 are allowed.

5. Applicant's arguments with respect to claims 2, 3, and 18-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen  
5/25/06



**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**